

## CLAIMS

1. A method for replicating a surface relief, said method comprising the steps of
  - 5     - providing a first layer of a non-metallic material, and
  - pressing into the first layer of non-metallic material an object comprising a surface so as to change surface properties of the first layer of non-metallic material in order to replicate at least one surface relief, said at least one surface relief forming part of the
    - 10     surface of the object.
2. A method according to claim 1, wherein the first layer of non-metallic material is selected from the group consisting of lacquers, polymers, printing inks or any combination thereof.
- 15   3. A method according to claim 1 or 2, wherein the first layer of non-metallic material is being held by a metal substrate.
4. A method according to claim 3, wherein the metal substrate holds a colour print.
- 20   5. A method according to any of the preceding claims further comprising the step of providing a second layer, said second layer being substantially transparent and covering at least part of the first layer of non-metallic material.
- 25   6. A method according to claim 5, wherein the second layer is selected from the group consisting of lacquers, polymers, laminated plastic, printing inks or any combination thereof.
7. A method according to claim 5 or 6, wherein the refractive index of the first layer of non-
  - 30     metallic material and the second layer is different.
8. A method according to <sup>claim 1</sup> ~~any of the preceding claims~~, wherein the at least one surface relief replicated in the first layer of non-metallic material comprises a diffracting optical element.

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9. A method according to <sup>claim 1</sup> ~~any of the preceding claims~~, wherein the thickness of the first layer of non-metallic material is within the range 1-50  $\mu\text{m}$ , such as within the range 2-25  $\mu\text{m}$ , such as within the range 2-20  $\mu\text{m}$ , such as within the range 5-15  $\mu\text{m}$ , such as within the range 5-10  $\mu\text{m}$ .

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10. A method according to <sup>claim 1</sup> ~~any of the preceding claims~~, wherein replication of the at least one surface relief is performed as a part of a rolling process.

11. A method according to ~~any of claims 1-9~~, wherein replication of the at least one sur-  
10 face relief is performed in a stamping process.

12. A method for replicating a surface relief, said method comprising the steps of

- 15 - providing a first layer of a non-metallic material, said first layer of non-metallic material being held by a metal substrate,
- pressing into the first layer of non-metallic material an object comprising a surface so as to change surface properties of the first layer of non-metallic material in order to replicate at least one surface relief, said at least one surface relief forming part of the  
20 surface of the object, and
- providing a metal layer onto at least part of the at least one replicated surface relief, said metal layer being substantially conform with the at least one replicated surface relief.

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13. A method according to claim 12, wherein the first layer of non-metallic material is selected from the group consisting of lacquers, polymers, printing inks or any combination thereof.

30 14. A method according to claim 12 ~~or 13~~ further comprising the step of providing a second layer, said second layer being substantially transparent and covering at least part of the metal layer.

15. A method according to claim 14, wherein the second layer is selected from the group consisting of lacquers, polymers, laminated plastic, printing inks or any combination thereof.
- 5 16. A method according to ~~any of claims 12-16~~, wherein the at least one surface relief replicated in the first layer of non-metallic material comprises a diffracting optical element.
17. A method according to ~~any of claims 12-16~~, wherein the thickness of the first layer of non-metallic material is within the range 1-50  $\mu\text{m}$ , such as within the range 2-25  $\mu\text{m}$ , such  
10 as within the range 2-20  $\mu\text{m}$ , such as within the range 5-15  $\mu\text{m}$ , such as within the range 5-10  $\mu\text{m}$ .
18. A method according to ~~any of claims 12-17~~, wherein the metal layer covering at least part of the at least one replicated surface relief comprises a highly refractive material,  
15 such as aluminium, silver, gold, titanium dioxide and zirconium dioxide or any combination thereof.
19. A method according to ~~any of claims 12-18~~, wherein replication of the at least one surface relief is performed as a part of a rolling process.
- 20 20. A method according to ~~any of claims 12-18~~, wherein replication of the at least one surface relief is performed in a stamping process.
21. An article for holding a surface relief, said article comprising  
25 - a metal substrate, and
- a first layer of non-metallic material being held by the substrate, said first layer of non-metallic material being adapted to hold at least one surface relief.
- 30 22. An article according to claim 21, wherein the at least one surface relief being held by the first layer of non-metallic material comprises a diffracting optical element.

23. An article according to claim 21 ~~or 22~~, wherein the first layer of non-metallic material is selected from the group consisting of lacquers, polymers, printing inks or any combination thereof.

24. An article according to any of claims <sup>21</sup> ~~21-23~~ further comprising a second layer, said second layer being substantially transparent and covering at least part of the first layer of non-metallic material.

25. An article according to claim 24, wherein the second layer is selected from the group consisting of lacquers, polymers, laminated plastic, printing inks or any combination thereof.

26. An article according to claim 24 ~~or 25~~, wherein the refractive index of the first layer of non-metallic material and the second layer is different.

27. An article according to ~~any of claims 21-26~~, wherein the metal substrate holds a colour print.

28. An article according to ~~any of claims 21-27~~, wherein the article forms an integrated part of a container, such as a food or beverage container.

29. An article for holding a surface relief, said article comprising

- a metal substrate,

- a first layer of non-metallic material being held by the substrate, said first layer of non-metallic material being adapted to hold at least one surface relief, and

- a metal layer covering at least part of the first layer of non-metallic material and being substantially conform with the at least one replicated surface relief being held by the first layer of non-metallic material.

30. An article according to claim 29, wherein the at least one surface relief being held by the first layer of non-metallic material comprises a diffracting optical element.

31. An article according to claim 29 or 30, wherein the first layer of non-metallic material is selected from the group consisting of lacquers, polymers, printing inks or any combination thereof.

5 32. An article according to ~~any of claims 29-31~~, wherein the metal layer covering at least part of the at least one replicated surface relief comprises a material selected from the group consisting of aluminium, silver, gold, titanium dioxide and zirconium dioxide or any combination thereof.

10 33. An article according to ~~any of claims 29-32~~ further comprising a second layer, said second layer being substantially transparent and covering at least part of the metal layer.

34. An article according to claim 33, wherein the second layer is selected from the group consisting of lacquers, polymers, laminated plastic, printing inks or any combination  
15 thereof.

35. An article according to ~~any of claims 29-34~~, wherein the article forms an integrated part of a container, such as a food or beverage container.

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